

New Jersey Institute of Technology  
**Digital Commons @ NJIT**

---

Computer Science Syllabi

NJIT Syllabi

---

Spring 2020

## CS 101-008: Computer Programming & Problem Solving

Wallace Rutkowski

Follow this and additional works at: <https://digitalcommons.njit.edu/cs-syllabi>

---

### Recommended Citation

Rutkowski, Wallace, "CS 101-008: Computer Programming & Problem Solving" (2020). *Computer Science Syllabi*. 46.

<https://digitalcommons.njit.edu/cs-syllabi/46>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Computer Science Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact [digitalcommons@njit.edu](mailto:digitalcommons@njit.edu).

**CS 101**  
**Introduction to Programming for Engineers**

**Instructor:** Wallace Rutkowski  
email: [wallace.rutkowski@njit.edu](mailto:wallace.rutkowski@njit.edu)  
office: GITC 4413  
phone: 973-596-5483

**Textbook:** MATLAB Programming for Engineers  
Author: Stephen J. Chapman  
Publisher: Thomson  
ISBN-13: 978-0-495-24449-3  
ISBN-10: 0-495-24449-X

**Grading:** There will be a midterm and a final examination. There will be numerous programming projects and some online quizzes posted on **canvas**. Due to the coronavirus crisis, the grading scheme will be modified as follows.

Final grade will be computed as:

Programs	50%
Quizzes	20%
Final (on-line)	30%

**Topics:**

Part of the course will introduce students to the application of computing in engineering. The majority of the course will teach the basic concepts of imperative programming using the MATLAB programming language. The main topics will be:

1. Input/output
2. Translating equations into MATLAB
  - arithmetic operators
  - calling functions
  - plotting
3. Sequence of control flow
4. Selection statements
  - relational operators
  - logical operators
5. Iteration statements
6. Writing functions
  - parameter passing
  - local variables
7. Introduction to Python